

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

COMMONWEALTH EDISON COMPANY,)	
)	
Approval of the Energy Efficiency and)	Docket No. 07-0540
Demand-Response Plan Pursuant to Section 12-103(f) of)	
the Public Utilities Act)	

Rebuttal Testimony of
VAL R. JENSEN
Senior Vice President, ICF International
On Behalf of Commonwealth Edison Company

EXHIBIT 12.0
ILL. COM. DOCKET NO. 07-0540
ComEd EXHIBIT NO. 12.0
Witness _____
On to _____ Reporter: _____

December 21, 2007

ComEd Ex. 12.0

TABLE OF CONTENTS

<i>I.</i>	<i>Introduction.....</i>	<i>1</i>
<i>A.</i>	<i>Witness Identification</i>	<i>1</i>
<i>B.</i>	<i>Purpose of Testimony.....</i>	<i>1</i>
<i>C.</i>	<i>Summary of Conclusions.....</i>	<i>1</i>
<i>II.</i>	<i>Program Design Recommendations.....</i>	<i>2</i>
<i>III.</i>	<i>ComEd's Proposal That The Commission Deem Values.....</i>	<i>9</i>

1 **I. Introduction**

2 **A. Witness Identification**

3 Q. Please state your name.

4 A. My name is Val R. Jensen.

5 Q. Are you the same Val R. Jensen who submitted direct testimony on behalf of
6 Commonwealth Edison Company ("ComEd") in this docket?

7 A. Yes. My initial testimony is ComEd Exhibit 6.0.

8 **B. Purpose of Testimony**

9 Q. What is the purpose of your rebuttal testimony?

10 A. The purpose of my testimony is to respond to and discuss proposals submitted in the
11 direct testimony of other parties regarding ComEd's Energy Efficiency and Demand
12 Response Plan ("Plan"). Specifically, I respond to the direct testimony of the Staff of the
13 Illinois Commerce Commission ("Staff"), the People of the State of Illinois ("AG"), the
14 Environmental Law and Policy Center ("ELPC") and the Natural Resources Defense
15 Council ("NRDC").

16 **C. Summary of Conclusions**

17 Q. Please summarize your conclusions.

18 A. (1) The Illinois Commerce Commission ("ICC" or "Commission") should not adopt
19 the various program design recommendations of Staff and intervening parties as
20 conditions of approving ComEd's Plan.

(2) The Commission should deem certain measure savings and net-to-gross ("NTG") ratio values and apply any future changes to those deemed values prospectively, as proposed in ComEd's Plan and supporting testimony.

II. Program Design Recommendations

Q. Please summarize the recommendations of Staff and intervenors with regard to the proposed design of the programs in ComEd's Plan.

A. Staff witness Mr. Zuraski notes that the energy savings calculations contain a flaw related to Energy Star transformers. (Staff Ex. 1.0, p. 18.) AG witness Mr. Mosenthal makes several sets of recommendations. He comments that programs should be consistent throughout the State as much as possible, and that contractor selection be organized around functional commonalities (*i.e.*, HVAC, lighting). He also recommends that more resources should be focused on lost opportunities. ELPC witness Mr. Crandall recommends that accommodation be made within the planning process and contracts with third party implementers to avoid program interruptions. He also recommends that the Residential Lighting, Appliance Recycling, and Residential New HVAC With Quality Installation program elements be ready to go as soon as the Commission issues its order. Finally, NRDC witness Mr. Henderson advises that ComEd consider adding a Residential New Construction program to its portfolio.

Q. Please explain and respond to Mr. Zuraski's conclusion that the energy savings calculations contain a flaw related to Energy Star transformers.

A. Mr. Zuraski notes, "[t]he Company's workbook contains a flaw that assigns a zero value for the avoided costs associated with [Energy Star Transformers]. The workbook's flaw would actually affect any measure with an assumed useful life greater than 21 years.

44 However, since 'Energy Star Transformers' (with useful lives of 25 years) were the only
45 measures in the file with assumed useful lives greater than 21, the flaw affected only the
46 computations for this one relatively small set of measures." (Staff Ex. 1.0, p. 18.)

47 Mr. Zuraski is correct. ED 1.01_Attach 4 (CONFIDENTIAL in Native
48 format).xls did contain an energy savings computation error related to the Energy Star
49 Transformers measure. The error occurred because the measure's life was greater than
50 21 years, and was confined to this measure because all other measures had a life of 20
51 years or less. The effect of this measure is negligible; however, if corrected, it would
52 increase first-year energy savings in the C&I Custom Incentives program element by less
53 than one percent (0.9%), and would increase the program's first year budget by about
54 \$25,000.

55 Q. What are AG witness Mr. Mosenthal's recommendations with respect to ComEd's
56 proposed portfolio of programs?

57 A. As an initial matter, it should be noted that Mr. Mosenthal only makes recommendations
58 "to be worked out through the collaborative process that commences when this docket
59 closes." (AG Ex. 1.0, p. 5.) And Mr. Mosenthal never disputes the fact that ComEd's
60 Plan is designed to achieve the goals. His recommendations include:

- 61 • Drop room air conditioners from the appliance recycling program and
62 consider dropping the entire program;
- 63 • Plan to implement the Residential New HVAC programs by January 2009;
- 64 • Immediately implement point of purchase promotions to encourage customer
65 to select efficient appliances, possibly in lieu of the appliance recycling
66 program;
- 67 • Consider upstream buydowns rather than coupons for the Residential Lighting
68 Program;

- Implement the C&I New Construction Program as soon as possible, but not limit participation to projects enrolled in the U.S. Green Building Council's LEED program;
- Consider delaying the start of the Retrocommissioning Program; and
- Not promote technologies that represent baseline practice or are suboptimal.

Q. Do you agree with these recommendations?

A. Not entirely. First, although I agree with Mr. Mosenthal's point that flexibility is important and that the ICC not direct Program Administrators to undertake specific implementation methods or design details (AG Ex. 1.0, P. 9-10), I do not agree that the proposed collaborative must reach consensus on such issues. As explained by Mr. Brandt in his rebuttal testimony (ComEd Ex. 9.0), the collaborative is an advisory group offering non-binding recommendations. The program designs ComEd proposes are initial designs that most likely will be modified to greater or lesser extents based on discussions with stakeholders and implementation contractors. To the extent that Mr. Mosenthal's recommendations above are advisory as opposed to recommendations for the Commission to consider in an order, these are reasonable points to explore. However, I do have several specific concerns with several recommendations, and to the extent they are not advisory, I do not believe that the Commission should adopt them.

Q. With which recommendations do you disagree and why?

A. First, I do not agree that contractor selection necessarily should be organized around "functional commonalities." (AG Ex. 1.0, p. 14.) To Mr. Mosenthal, this means that ComEd should hire implementation contractors who deal with particular trades or distribution channels. ComEd has proposed to organize contractor selection around markets (residential and business customers). There are a number of schools of thought

93 about program design, each with strengths and weaknesses. I agree that coordination in
94 certain markets, such as HVAC, across residential and small commercial is important.
95 However, ComEd is interested in presenting comprehensive solutions to customers, and
96 not in having multiple trade-based implementation contractors independently trying to
97 achieve their contractual goals. I agree that, under the customer solutions umbrellas, it is
98 very important to coordinate interaction with the trades. In any event, this is clearly a
99 topic for discussion among the parties as ComEd proceeds with final program design.

100 Second, Mr. Mosenthal argues that ComEd should reverse its current allocation of
101 more resources to appliance recycling than new efficient appliances. (*Id.*, pp. 16-17.)
102 While I agree that it is important to pursue lost opportunities, ComEd is responsible for
103 meeting specific savings targets. Quite simply, a program to incent customers to
104 purchase more efficient appliances as those appliances are replaced cannot make a
105 significant contribution to meeting early year targets. Appliance loads, aside from
106 refrigerator loads, are relatively small contributors to total residential consumption, and
107 the incremental savings to be gained from replacement of a standard efficiency
108 refrigerator with an efficient refrigerator are insubstantial given now high the federal
109 efficiency standard is for refrigerators. I would agree that second refrigerator pick-up and
110 recycling programs should not be a program option relied upon for the long term. But
111 even assuming a low net-to-gross ratio, refrigerator recycling programs often are quite
112 cost-effective. Removing old second refrigerators from the market eliminates a
113 significant residential load, and in my view it would be extremely unlikely that ComEd
114 could achieve a similar load reduction at a similar cost by providing incentives for more
115 efficient dishwashers, washers, freezers, dehumidifiers and room air conditioners. I also

116 should note that Mr. Mosenthal takes issue with the fact that the program would pick up
117 refrigerators only if they were manufactured before 1993. (AG Ex. 1.0, at 17.) Although
118 it is true that the program's estimated energy savings for refrigerators were based on an
119 assumed in-service date of 1993 or before, the program would not restrict pick-ups to
120 only that vintage.

121 Third, and related to the previous issue, Mr. Mosenthal comments that ComEd
122 has favored short-lived measures such as CFLs and appliance recycling, while ignoring
123 longer-lived measures such as new efficient appliance and all-electric home heating
124 measures. (*Id.*, pp. 18-19, 21.) I believe this comment is a mischaracterization of
125 ComEd's Plan and the analysis underlying it. These longer-lived measures all were
126 examined by ComEd, and in fact are included in the Plan. However, it is simply a fact
127 that the incremental energy savings associated with appliances are insubstantial. Finally,
128 I note that ComEd has designed a program to target all-electric homes.

129 Fourth, Mr. Mosenthal comments that the Residential Lighting program element
130 should not use coupons, but instead should move to an upstream buy-down program.
131 (*Id.*, pp. 22-23.) I have no substantive disagreement with his statements about the virtues
132 of an upstream program, and, in fact, the proposed program explicitly notes that the
133 program design would be patterned after the Change-a-Light promotions which have
134 used buy-downs or retailer discounts. However, Mr. Mosenthal does not mention that the
135 net verified savings associated with upstream programs can be much more difficult to
136 identify, and there can be a trade-off between program cost and program net
137 effectiveness. I also believe that it can be much more difficult to minimize free ridership
138 in a manufacturer buy-down program.

139 Fifth, Mr. Mosenthal recommends that ComEd not include standard T8 linear
140 fluorescent lamps in its offering to commercial and industrial customers, as these
141 represent a sub-optimal technology. He notes that standard T8s are "generally baseline
142 practice in virtually all new C&I lighting installations." (*Id.*, p. 25.) I agree that standard
143 T8s are no longer the most efficient lighting solution for replacement of T12 lamps, but I
144 do not agree that they should be disallowed from the program. Although clear baseline
145 data is lacking, if ComEd's service territory is like many others, a significant portion of
146 commercial and industrial lighting space is lit with T12s. Substantial savings could be
147 realized by replacing these with standard T8s in retrofit situations. While I would
148 recommend that ComEd promote adoption of High Performance T8s, there is no reason
149 why ComEd should not be able to incent a retrofit of T12 lighting with T8 lamps, so long
150 as the incentive levels properly reflect the expected savings. The real lost opportunity is
151 when a customer elects not to retrofit clearly inefficient lighting because he does not wish
152 to install high performance T8s. As a practical matter, ComEd's Plan is based on
153 analysis that shows that 80% of the linear fluorescent lamps installed will be High
154 Performance T8s.

155 Q. Please address Mr. Crandall's recommendation that accommodation be made within the
156 planning process and contracts with third party implementers to avoid program
157 interruptions. (ELPC Ex. 1.0, p. 6.)

158 A. I believe that Mr. Crandall raises a legitimate concern, but I am not sure there is a perfect
159 answer given the annual nature of spending and savings targets. However, ComEd
160 witness Mr. Brandt addresses this issue in the context of banking (ComEd Ex. 2.0, Ex.
161 9.0.)

162 Q. Please address Mr. Crandall's recommendation that the Residential Lighting, Appliance
163 Recycling, and Residential New HVAC With Quality Installation program elements be
164 ready to go as soon as the Commission issues its order. (ELPC Ex. 1.0, pp. 7-8.)

165 A. As an initial matter, the statute's Plan year begins June 1, 2008. However, ELPC's
166 proposal fails to explain how early implementation would be funded or how to account
167 for savings. With respect to the practical limitations on ELPC's proposal, if lighting and
168 appliance programs are not designed to fit within the stocking and promotional schedules
169 of retailers, distributors and manufacturers, they will fail. These stocking and
170 promotional activities for the spring most likely were finalized months ago, and HVAC
171 programs tend to have their greatest participation in the lead-up to a cooling season
172 (April, May and June). I do not believe that it is feasible to have this program ready by
173 March, again because this program needs to be developed in consultation with HVAC
174 dealers and distributors, and it very likely is too late to accomplish that by the start of the
175 2008 HVAC buying season. It simply is not feasible to have all of these programs ready
176 to go by February 15, nor is it contemplated by Section 12-103. A February 15 launch
177 would have only been possible had ComEd begun actual detailed implementation
178 planning and implementation services procurement months ago.

179 Q. Do you agree with NRDC witness Mr. Henderson's recommendations regarding the
180 establishment of a residential new construction program? (NRDC Ex. 1.0, p. 4.)

181 A. First, I read Mr. Henderson's recommendation as advisory, as he recommends elsewhere
182 in his direct testimony that ComEd's Plan be approved as-is. (*Id.*, p. 12.) Thus, Mr.
183 Henderson simply is recommending that ComEd consider adopting such a program.
184 Second, I will note that ComEd did consider such a program explicitly in its analysis. An

185 Energy Star Homes program was analyzed for cost-effectiveness, but did not achieve a
186 TRC benefit-cost ratio of greater than 1.0. The reason for the failure was the exclusion of
187 natural gas savings from the calculation of benefits. This issue was widely discussed in
188 stakeholder workshops.

189 However, ComEd believed that it was very important to address the potential lost
190 opportunities in residential new construction. Therefore, a program was developed that
191 promotes adoption of the Energy Star Advanced Lighting Package in new construction.
192 This program passed the TRC test and is included in the portfolio. In particular, this
193 program is intended to provide ComEd with the opportunity to engage builders in a
194 conversation regarding energy efficiency via promotion of a high efficiency lighting
195 package. Although a broader range of incentives cannot be justified based on electric-
196 only savings in a market that is dominated by gas, ComEd hopes to use this program to
197 build a foundation for a more aggressive new construction program if gas savings are
198 allowed to be counted at some point.

199 **III. ComEd's Proposal That The Commission Deem Values**

200 Q. As an initial matter, what is ComEd's proposal regarding the deeming of certain measure
201 savings and net-to-gross ("NTG") ratio values?

202 A. As described in my direct testimony, (ComEd Ex. 6.0, pp. 35-43), I recommend that the
203 Commission deem two separate sets of values in this docket for use by the independent
204 evaluator when calculating the actual savings associated with certain programs in
205 ComEd's Plan:

206 (1) certain non-weather-sensitive measure savings values set forth in Tables 6 and
207 7 of my direct testimony, which are well-established values of the amounts of kWh
208 savings that can be attributed to a given measure, and

209 (2) NTG ratio values set forth in Table 8 of my direct testimony, which are
210 numbers based on post-implementation evaluation of program impacts that help measure
211 the cost-effectiveness of the programs by taking into account "free rider" and "spillover"
212 effects (concepts explained in my direct testimony). (ComEd Ex. 6.0, pp. 25-26.)

213 As I stated in my direct testimony:

214 [T]he Commission should deem the proposed measure savings and
215 NTG ratio values for the initial, pre-evaluation period of ComEd's
216 three-year Plan. If the independent evaluator later finds that one or
217 more of the deemed values is inappropriate and provides evidence
218 to support that assertion, the values certainly should be adjusted,
219 but only prospectively. In particular, if the independent evaluator
220 modifies values deemed by the Commission or otherwise
221 establishes new values, those values only should be applied in
222 subsequent Plan years and not to savings booked to that point or
223 otherwise booked in the current Plan year. Retroactive application
224 of new values would introduce additional uncertainty and risk to
225 the process.

226 (*Id.*, p. 38.)

227 Q. Please summarize the parties' responses to ComEd's proposal that the Commission deem
228 certain measure savings and net-to-gross ("NTG") ratio values in its initial approach to
229 EM&V.

230 A. All parties appear to agree that deeming of certain values for evaluation purposes is
231 appropriate in certain contexts. Except for Staff witness Mr. Zuraski, who questions
232 whether deemed values ever should be used in a planning docket such as this one, no

233 parties have objected to ComEd's proposal that the Commission deem certain measure
234 savings values in this docket for future evaluation purposes. Further, only AG witness
235 Mr. Mosenthal raises specific concerns about ComEd's proposal that the Commission
236 deem certain NTG ratio values (although Mr. Zuraski's general concerns about deemed
237 values in planning dockets also apply to the NTG ratio values). I also will respond
238 specifically to Staff's concerns about some of the particular values set forth in Tables 6, 7
239 and 8 of my direct testimony, and generally to the more global concerns that Staff and the
240 AG have regarding deemed values. These general concerns are addressed more
241 thoroughly, however, in the rebuttal testimony of Nicholas Hall. (ComEd Ex. 13.0.)

242 Q. In both his data requests to ComEd (Request No. ED 2.05) and his direct testimony (Staff
243 Ex. 1.0, pp. 27-29), Mr. Zuraski identified some potential inaccuracies regarding the
244 measure savings values set forth in Tables 6 and 7 of your direct testimony. Specifically,
245 he notes that when he attempted to perform the calculations outlined in your direct
246 testimony related to the deemed savings values for certain lighting measures, he obtained
247 different results. What is your response?

248 A. In ComEd's response to Staff's Data Request No. ED 2.05, I provided corrected Tables 6
249 and 7. Today, ComEd filed a corrected version of my direct testimony (ComEd Ex. 6.0
250 Corrected) that includes these two corrected tables. I believe that the data request
251 response and the corrected version of my direct testimony should address Mr. Zuraski's
252 issue with the calculation of the deemed measure savings values in Tables 6 and 7.

253 Q. What is your response to Mr. Zuraski's objection to having the Commission deem
254 measure savings values in this planning docket?

255 A. I disagree with Mr. Zuraski. As described in the rebuttal testimony of Mr. Hall, every
256 other state that has implemented energy efficiency programs has deemed certain non-
257 weather-sensitive measure savings values. Accordingly, given this precedent, Mr.
258 Zuraski's position is an isolated one, and none of the other parties in this docket object to
259 this proposal.

260 Q. What is your response to the concerns of both Mr. Zuraski and Mr. Mosenthal regarding
261 the NTG ratio values that ComEd proposes the Commission deem in Table 8 of your
262 direct testimony?

263 A. When asked in his testimony if he identified any inaccuracies with the deemed values
264 within Table 8 of my direct testimony, Mr. Zuraski's response was "yes". (Staff Ex. 1.0,
265 pp. 30-31.) While Mr. Zuraski identifies some important issues with respect to the
266 deeming of NTG ratio values, which are addressed in Mr. Hall's rebuttal testimony, I do
267 not believe that his testimony shows that any specific proposed NTG ratio value
268 presented in my testimony is in error. Rather, Mr. Zuraski states that the values "seem[]
269 suspicious to [him]." (*Id.*, p. 31.)

270 Notwithstanding Mr. Zuraski's suspicions, Table 8 of my direct testimony shows
271 that ComEd is proposing that for most programs, the Commission deem a NTG ratio
272 value of 0.8. As Mr. Hall states in his rebuttal testimony, these are in fact default values
273 used in California, and the California Public Utilities Commission recognizes that these
274 will be adjusted as actual evaluations take place. They are based on review and
275 discussion of evaluation findings for hundreds of programs in California over many
276 years, and the Public Utilities Commission in California has determined that they are

277 reasonable. They are not, as Mr. Zuraski suggests, "much more of a guesstimate than the
278 result of years of empirical study." (Staff Ex. 1.0, p. 31.)

279 Q. Do you agree with Mr. Zuraski's and Mr. Mosenthal's comments that the Commission
280 should not deem NTG ratio values in this planning docket?

281 A. No. I agree with the justification for ComEd's proposed deemed values described in Mr.
282 Hall's direct and rebuttal testimony. I continue to believe that it is appropriate and sound
283 for the Commission to deem these values for purposes of the evaluation of ComEd's
284 programs, at least initially. If these values later are changed based on the
285 recommendation of ComEd's evaluation contractor or another party, the changes should
286 apply on a going forward basis only.

287 The fact is, ComEd and the State of Illinois are embarking on a very aggressive
288 energy efficiency initiative. ComEd has very explicit goals to meet, and faces very clear
289 consequences if it does not meet those goals. It has designed a set of programs that I
290 believe are sound and give ComEd a very high probability of meeting these goals if the
291 programs are well-executed. Yet even if ComEd succeeds in achieving the participation
292 levels it believes it needs to meet its targets, even if it executes program designs that
293 stakeholders agree are sound, even if the gross savings it realizes exceed the targets
294 required, it can still be found to have missed its goals simply by virtue of an evaluator,
295 after the fact, arriving at a new measure savings value or an estimate of a NTG ratio that
296 is below 0.8. This estimate inevitably will be based on limited survey research due to
297 budget limitations and limited program experience. Thus, there is a very real risk that
298 ComEd could do everything right in designing and implementing its programs and still be
299 found to have failed simply based on a single study that inevitably will raise its own

methodological concerns. This would be tremendously unfair to the utility, particularly given the following:

(1) The Year 2 evaluation will likely not be complete until well into Year 3 and the final evaluation of ComEd's programs will not be complete until after the first three-year cycle is well over, so if the evaluator should conclude that the "actual" net-to-gross number is lower than ComEd proposes, ComEd has no way to make up any shortfall.

(2) The actual risk faced by ComEd goes well beyond the monetary risk enumerated by Mr. Zuraski on page 44 of his direct testimony. While I am not an attorney, it is my understanding that in addition to having to pay a monetary penalty, if ComEd does not meet the statutory energy savings requirements after three years, it can lose the operation of the energy efficiency programs to the Illinois Power Agency.

Q. If the Commission does not accept ComEd's deeming recommendation, in whole or in part, do you suggest an alternative?

A. Yes. I continue to believe that is in the interests of all parties to deem both measure savings and NTG ratio values and apply prospectively any future changes to those values determined by the evaluator, in conjunction with the collaborative. If the Commission chooses not to approve ComEd's deeming proposal, however, whether in whole or in part, I recommend that the Commission still find that any future changes to the measure savings or NTG ratio value estimates be applied only on a going-forward basis. Moreover, the NTG ratios estimated by the evaluator should include not only an estimate of free riders, but also an estimate of spillover effects. Mr. Zuraski defines these terms

322 very clearly in his direct testimony (Staff Ex. 1.0, p. 30) and does not dispute the value of
323 including spillover in a NTG ratio estimate. Evaluation theory is entirely consistent with
324 this approach. In addition, I would urge the Commission not to rule against the option of
325 deeming values in a planning docket. In sum, I recommend that whether or not the
326 Commission deems values in this docket, any future changes to those values should be
327 applied prospectively.

328 Q. Does this conclude your rebuttal testimony?

329 A. Yes.